

# **Update on Columbia River Total Dissolved Gas Total Maximum Daily Loads**



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## **Update on Columbia River Total Dissolved Gas TMDLs**



### ➤ Columbia and Snake River TDG TMDLs

- Lower Columbia TDG TMDL
  - Joint issuance by OR and WA end of September
- Lower Snake TDG TMDL
  - Preliminary Draft Fall 2002
- Mid Columbia/Lake FDR TDG TMDL
  - Preliminary Draft Winter 2003

## **Update on Columbia River Total Dissolved Gas TMDLs**



### ➤ What's the problem?

- Dam spills create total dissolved gas (TDG)
- TDG can cause gas bubble trauma (GBT)
- Spills need to meet fish passage goals
- Spills also caused by high flows or no power generation
- Columbia and Lower Snake Rivers on 303d list

## **Update on Columbia River Total Dissolved Gas TMDLs**



### ➤ Lower Columbia TDG TMDL

- Allocations for each of 4 dams and upstream
- Allocations in excess pressure ( $\Delta P$ )
- Compliance location below spillway
- Upstream compliance in McNary pool
- Implementation in 2 phases
  - Phase 1 (through 2010): implement BiOp
  - Phase 2 (2011-2020): meet both WQ and ESA goals

# **Update on Columbia River Total Dissolved Gas TMDLs**



- Lower Snake TDG TMDL
  - Similar to Lower Columbia TDG TMDL
    - Dams have similar configuration
  - Issued by State of Washington
  - Will include 2002 data from Lower Granite
    - Ecology and USACE near-field studies

# **Update on Columbia River Total Dissolved Gas TMDLs**



## ➤ Mid Columbia/Lake FDR TDG TMDL

- Greater variety of dam configurations
- Jointly Issued
  - State of Washington below Grand Coulee
  - EPA for Tribal waters and Lake FDR
- Will include 2002 data from several dams
  - Ecology and USACE near-field studies

# **Update on Columbia River Total Dissolved Gas TMDLs**



## ➤ Mid Columbia/Lake FDR TDG TMDL

### ▪ Unique challenges

- Unusual dam configurations (Wells, Grand Coulee)
- Lake FDR analysis – what kind of model?
- Spokane River sources
- Canadian sources
- Tribal needs
- Keep trading options open (Chief Jo/Grand Coulee)

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## ➤ Public involvement opportunities

- Fall 2002
  - Lower Snake informal public review
- Fall 2002/Winter 2003
  - Workshops at temperature TMDL public hearings
- Winter 2003
  - Lower Snake formal public review and hearings
  - Mid-Columbia/Lake FDR informal public review
- Spring 2003:
  - Mid-Columbia/Lake FDR formal review and hearings